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ABSTRACT

A behavior modification program in toilet training, utilizing reinforcing properties of music, candy, cold drinks, and television was instigated with institutionalized (nontoilet trained) males, ages 15-20 , who were profoundly, severely and moderately mentally handicapped. Eleven experimental and 11 control subjects were involved. A Toileting Rating Scale was administered once each day during the 45 days of training, and Elimination Baseline data (indicating type and place of elimination) was recorded. Both groups underwent the training sessions, but the control group received only verbal rewards. Results showed that the multi-sensory reinforcement did cause an increase in the number of successful toiletings (self and other initiated) over the control group, with candy and music the most frequently selected reinforcers (82.8%). (KW)

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USE OF MULTI-SENSORY REINFORCEMENT IN TOILET TRAINING RETARDATES

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PROBLEM

Although many of the ambulatory residents at this hospital have been toilet trained through diligent efforts by staff working in intensive toilet training programs without orientation to methods of behavior modification, 64.4% of the resident patients did not respond to this type of program. It was proposed that a well systematized behavior modification program in toilet training utilizing the back-up reinforceing properties of multi-sensory stimulation would strengthen the critical self-help skill of toileting in non-toilet trained residents.

Since the acquisition of a high level of self-help skills in all areas is paramount for a resident before outside placement is considered, the success of this project could point the way toward released time for staff to develop other new behaviors so desperately needed to realize the goal of community placement.

METHOD:

A ward was selected where over one-third of the male ambulatory resident population were not toilet trained. Twenty-two residents who were not trained participated in this study (eleven experimental subject and eleven control) and were matched with as great an accuracy as possible according to age and I.Q. Their ages ranged from 15-20 years and I.Q.'s were in the profound, severe and moderately retarded ranges.

The staff was specifically trained in behavior modification theory and the methods of data collection for this study. Elimination baselines indicating the type of elimination: U = urination, D = defecation or UD = urination and defecation; and place of elimination. C = clothing, T = toilet, CT = clothing on toilet, O = place other than toilet (or CO = clothing), were inserted on a data form at each occurrence in a 24 hour period for seven days before the start of the project.

On the day before training began, both the experimental and control groups were given a Toileting Rating Scale that included the following aspects of toileting behavior: 1) approaches bathroom, 2) approached toilet, 3) pulls pants down, 4) sits on toilet, 5) remains seated, 6) eliminates, 7) wipes area, 8) washes hands.

From day one through day ten, one experimental resident at a time was taught how to operate each sensory stimulation device by using a coin. The mechanical devices included stereophonic tape recorder with three head phone sets, candy machine, television and drink dispensers. These devices were coin-operated.

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USE OF MULTI-SENSORY REINFORCEMENT IN TOILET TRAINING RETARDATES (CONT'D)

During the period from day eleven to day forty-five, each resident was scheduled according to baseline data for toilet training sessions. When a resident successfully completed a section of the toileting procedure, he was reinforced only with verbal praise in the control group, and verbal praise plus coins in the experimental group. Each day during this period the Toileting Rating Scale was administered to each resident at the time of the second scheduled toileting session.

The coins earned by the experimental group were exchanged for the resident's choice of sensory stimulation device, twice a day in the sensory stimulation room. During each session in the room, the resident's choice was recorded on a Machine Selection Data Form.

Immediately following training, both groups were given the Toileting Rating Scale and a comparison was made with the first Toileting Rating Scale administered. In addition, another week of Elimination Baselines were recorded for each group and the data were compared to the first week baseline.

RESULTS:

When comparing the first five days of Toileting Rating Scales to the last five days for each group, improvement in the experimental group as compared with the control group was not significant.

However, data from the Elimination Baselines was more promising. The number of self-initiated toiletings increased in both groups, but the increase in the experimental group was not significant when compared with the control group. The increase in the number of "other" initiated toiletings increased significantly in the experimental group as compared with the control group. And, although the number of accidents in the experimental group decreased, the decrease was not significant when compared with the control group's relatively constant accident rate.

The increase in total number of toiletings (self and other initiated and accident) is not significantly greater for the experimental than for the control group. Since the prime target was significant increase in self-initiated toileting, the data do not indicate that this goal was reached.

On the other hand, the total number of "Successful" toiletings (self and other initiated) did increase significantly for an experimental group as compared with the control. This was achieved by an increase in self toileting in the experimental group (while its number of other toiletings remained constant) as compared with a smaller increase in self-initiated toileting in the control group and a significant decrease in "other" initiated toileting.

Since the number of "successful" toiletings did increase significantly for the experimental as compared with the control group, it is interesting to note the following preferences of rewards: 1) Candy @ 10¢ - 44.3%, 2) Stereo music @ 5¢ - 38.5%, 3) Cold Drinks @ 10¢ - 8.7%, 4) Television @ 5¢ - 8.2%.

USE OF MULTI-SENSORY REINFORCEMENT IN TOILET TRAINING RETARDATES (CONT'D)

The difference between the frequency of a candy reward and stereophonic music is not realistically significant. There is a coefficient of correlation of .419 between the amount of improvement in "successful" toiletings, (self and other initiated) and the number of candy and music reinforcers. The correlation between music and "successful" toiletings is .271 and between cand and "successful" toiletings is .051, which would indicate that music is slightly more effective than candy as a reinforcer.

CONCLUSION:

A combination of music, candy, cold drinks and television served to bring about an increase in the number of "successful" toileting (self and other initiated) in a group reinforced as compared to a control group. Candy and music accounted for 82.8% of the reinforcers selected with music showing slightly higher efficiency than candy.